

431/289

[This Drawing is a full-size reproduction of the Original.]

Fig. 1.

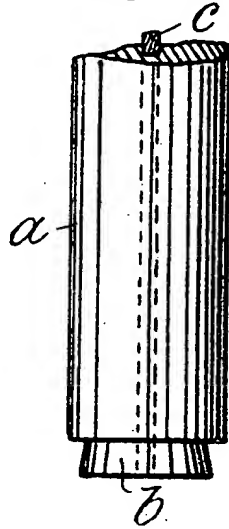


Fig. 2.

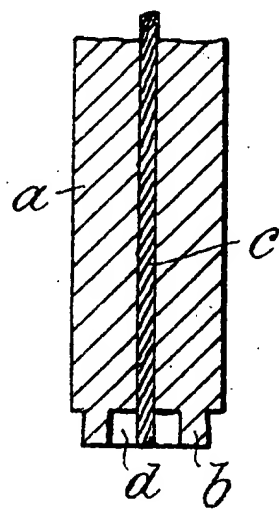


Fig. 3.

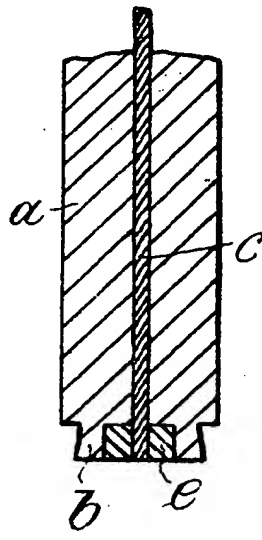


Fig. 4.

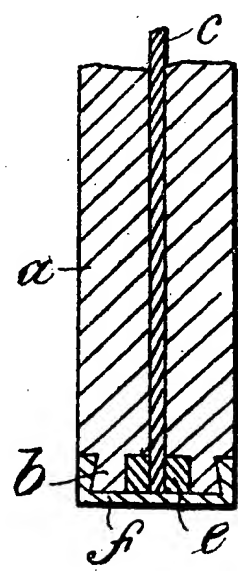
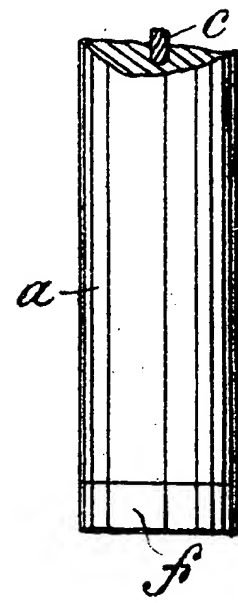


Fig. 5.



67
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COMPLETE SPECIFICATION.

Improvements in Candles, applicable especially to those for Burning in Spring Lamps.

I, WILLIAM CALDERWOOD, Director of Palmer & Company, Limited, Victoria Oil and Candle Works, Stratford, in the County of Essex, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

- 5 This invention relates to improvements in candles, applicable especially to those for burning in spring lamps. Such candles, manufactured in the manner described in the Specification of prior Patent No. 23,789 of 1900 granted to myself and another, possess one or two disadvantages in commerce and manufacture, which restrict their use, and at times impair their efficiency as illuminants. Chief amongst these disadvantages is the danger of particles of plaster adhering to the outside of the candles and eventually, when burning, getting into the liquid material, and interfering with the capillary action of the wick. Furthermore, unless candles made with a plaster base are very carefully packed, the base at times gets broken, rendering the efficiency claimed for such candles useless, so that candles of this description to avoid this disadvantage, must be packed in comparatively expensive boxes, excluding the cheaper and more common trade method of packing candles, *viz*: in paper parcels or packets. It has also been proposed to enclose the incombustible ends or bases of candles and night-lights in an outer paper or metal lining and I do not make any claim to such constructions.

20 The end of a candle manufactured according to my present invention is illustrated in the accompanying drawings in which;—

Fig. 1 is an outside elevation of the end of a candle having an end of dovetail section moulded thereon;

- 25 Fig. 2 is a sectional elevation showing the additional hole trepanned around the wick;

Fig. 3 shows the wick hole filled up;

Fig. 4 the final covering applied to cover the moulded end and the filling in the trepanned hole, and

- 30 Fig. 5 is an outside elevation of a finished candle.

In carrying out the present invention and in order to overcome these disabilities, and make the incombustible ends more efficient, the candles *a* are first prepared with a moulded projection *b* of dovetail design in the manner described in the Specifications of my prior Patents Nos. 23,789 of 1900, or 10,841 of 1907, and as shown in Fig. 1 of the drawings.

- 35 The ends of these candles are, whilst in the machine or otherwise, trepanned round the wick *c* as shown at *d*, leaving the same clear for a short distance, and into the hole so trepanned is cast a small piece of plaster, cement, or the like *e*, previously made impervious to saturation and subsequent ignition (when the flame reaches it) by chemically treating it with a solution of alum, soda or the like. After the casting of the said piece of incombustible material *e* round the wick *c* another protecting covering *f* is applied to completely cover the end of the candle as shown in Fig. 4. Such a substance, ivory or ebony-like and paraffin, carnauba, montan, or ceresin wax with a base such as zinc oxide,
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[Price 8d.]

Calderwood's Improvements in Candles.

alumina, barium carbonate or the like; such treatment forming zinc stearate and wax, aluminium stearate and wax, barium stearate and wax or the like, which is then moulded around the projection in the manner already described in the prior specifications referred to.

Obviously the bases of candles so prepared have all the advantages of those described in the Specification of prior Patent 23,789 of 1900, whilst they are not so brittle and are free from the deteriorating action of moisture, inseparable from those hitherto made with plaster, and by reason of the chemically-prepared piece of cement and the like attached to the wick in the trepanned hole, the base is made completely incombustible. Furthermore, candles so prepared are free from any liability to have pieces of plaster adhering to them occasioned by damaged bases, and as it is impossible to easily injure a base so constructed, these candles can be packed in the usual and less expensive form adopted in the trade, *viz:* in paper packets.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. Candles having their wicks attached at their base ends to an incombustible material, around which another protecting medium is moulded so as to completely enclose the incombustible material and protect the ends of the candle substantially as described.

2. The improved process of making candles consisting of trepanning the end, into which an incombustible substance is cast, and around the projection on the candles, the moulding of an ivory- or ebony-like protecting substance.

Dated this 13th day of October, 1911.

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